

# MVL-MF5028M-5MPE

## 2/3" 50mm 5MP FA LENS

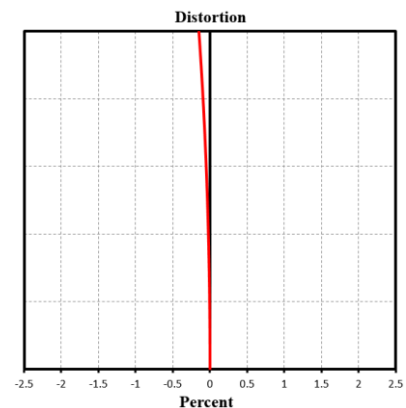
MF-E series FA Lens are optimized for machine vision light sources and sensors, with high resolution, excellent image uniformity, high transmittance and good stability. Featured with fixed focal length, manual aperture and compact size, it is suitable for machine vision industry applications.



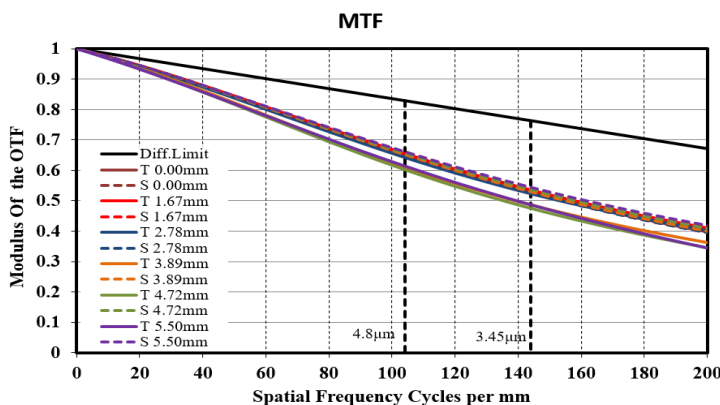
### Key Features

- High resolution and consistency of image clarity.
- Lower distortion and higher relative illumination rate.
- Achromatic optical system design and better imaging performance with color camera.
- Excellent performance at high and low temperature.
- Good optical performance at ultra-short working distance.

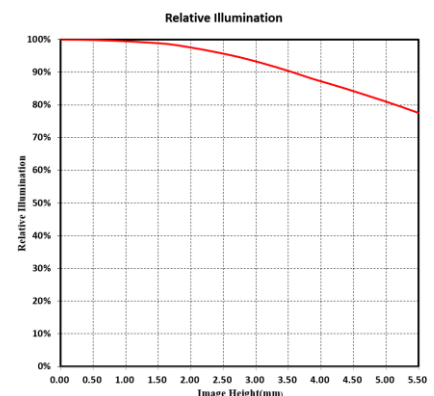
### Distortion



### MTF



### Relative Illumination

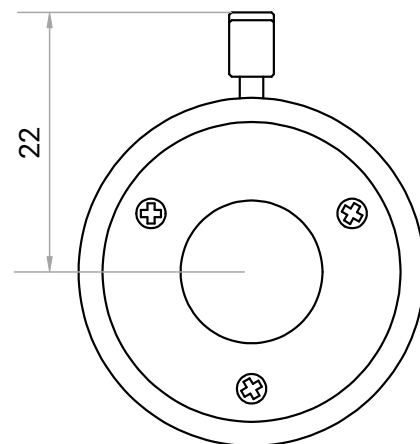
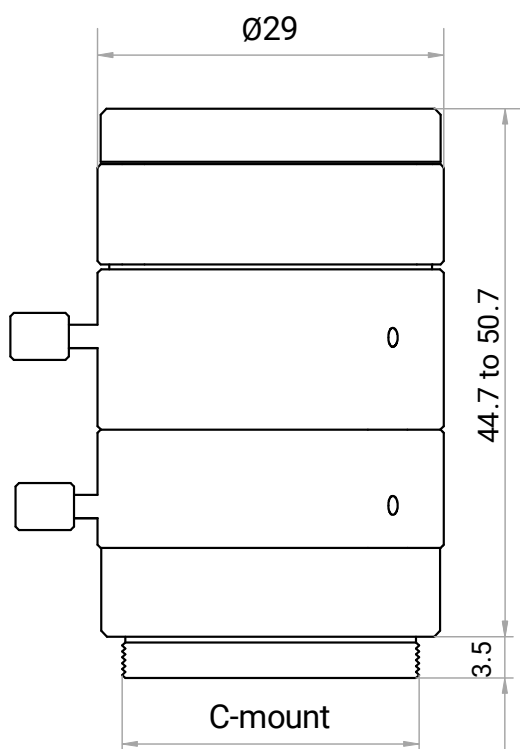


Note: The above curves are the simulate results based on F2.8,  $\beta=-0.126$ , WD=400 mm.

## Specification

	<b>Model</b>	<b>MVL-MF5028M-5MPE</b>
<b>Parameter</b>	<b>Fixed focal length, Manual iris, 5MP, FA Lens</b>	
<b>Performance</b>		
<b>Focal length</b>	50 mm	
<b>F-number</b>	F2.8 to F16	
<b>Image size</b>	Ø11 mm (2/3")	
<b>TV distortion</b>	-0.09%	
<b>Min. object distance</b>	0.4 m	
<b>Field of view</b>	D (11.1 mm): 11.6° H (8.45 mm): 8.8° V (7.07 mm): 7.4°	
<b>Mechanical</b>		
<b>Iris control</b>	Manual	
<b>Focus control</b>	Manual	
<b>Filter thread</b>	M27 × 0.5	
<b>Mount</b>	C-mount	
<b>Flange focal length</b>	17.526 mm	
<b>Dimension</b>	Ø29 mm × 44.7 mm to 50.7 mm (Ø1.1" × 1.8" to 2.0")	
<b>Weight</b>	80.9 g (0.2 lb.)	
<b>Temperature</b>	-10 °C to 50 °C (14 °F to 122 °F)	
<b>General</b>		
<b>Certification</b>	RoHS 2.0	

## Dimension



Unit: mm

## Field of View

Ring thickness (mm)	Working distance (mm)		Magnification	Field of view (mm)					
				2/3"		1/1.8"		1/2"	
				H (8.45mm)	V (7.07mm)	H (7.38mm)	V (4.92mm)	H (6.22mm)	V (4.67mm)
30	Near	81.6	-0.751	11.2	9.4	9.8	6.5	8.3	6.2
	Far	93.6	-0.632	13.3	11.2	11.7	7.8	9.8	7.4
25	Near	91.9	-0.647	13.0	10.9	11.4	7.6	9.6	7.2
	Far	108.5	-0.528	16.0	13.4	14.0	9.3	11.8	8.8
20	Near	106.0	-0.543	15.5	13.0	13.6	9.0	11.4	8.6
	Far	130.8	-0.424	19.9	16.6	17.4	11.6	14.7	11.0
15	Near	126.9	-0.439	19.2	16.1	16.8	11.2	14.2	10.6
	Far	167.6	-0.320	26.4	22.1	23.1	15.4	19.4	14.6
10	Near	160.9	-0.335	25.2	21.1	22.0	14.7	18.6	13.9
	Far	240.5	-0.215	39.2	32.8	34.3	22.8	28.9	21.7
5	Near	225.9	-0.230	36.7	30.6	32.0	21.3	27.0	20.3
	Far	452.0	-0.111	76.4	63.9	66.7	44.5	56.2	42.2
2	Near	304.1	-0.168	50.4	42.1	44.0	29.3	37.1	27.8
	Far	1027.6	-0.048	177.4	148.4	155.0	103.4	130.7	98.1
1	Near	345.1	-0.147	57.6	48.2	50.3	33.5	42.4	31.8
	Far	1825.4	-0.027	317.3	265.6	277.9	185.4	234.4	176.1
0		400	-0.126	67.2	56.2	58.7	39.1	49.5	37.1
		450	-0.111	76.0	63.6	66.4	44.2	55.9	42.0
		500	-0.100	84.8	70.9	74.1	49.4	62.4	46.9
		550	-0.090	93.6	78.3	81.7	54.5	68.9	51.7
		600	-0.083	102.4	85.6	89.4	59.6	75.3	56.6
		650	-0.076	111.1	93.0	97.1	64.7	81.8	61.4
		700	-0.071	119.9	100.3	104.7	69.8	88.3	66.3
		800	-0.062	137.4	115.0	120.1	80.0	101.2	76.0
		900	-0.055	155.0	129.7	135.4	90.3	114.1	85.7
		1000	-0.049	172.5	144.4	150.7	100.5	127.0	95.4